TEC-504 1160

Odd Semester Examination, 2017-18

B.TECH (SEMESTER-V)

ADVANCE MICROPROCESSOR

Time: 03:00 Hours **Max Marks: 100**

Note: Attempt **all** questions.

1. Attempt **any four** of the following: [5x4]

   (a) Explain different addressing modes of 8085 Identify the addressing mode of following instructions:

   i. LXI H, F 500 H

   ii. MOV A, B

   iii. STA 2500H

   (b) Explain the function of USART in brief with its block diagram.

   (c) Explain the difference between a microprocessor and microcontroller.

   (d) Describe the function of the 8086 instruction queue. How does it speed up processing?

   (e) Explain the physical address formation with segment and offset words.

   (f) Determine the control word for the following configuration of the ports of 8255.

   Port A - Output

   Mode of Port A- Mode1

   Port B- output

   Mode of Port B –Mode 0

   Port C lower – output

   Port C upper – Output

2. Attempt **any four** of the following: [5x4]

   (a) Classify the instruction of 8086 microprocessor in different group .Also provide an example for each.

   (b) Explain the features of 80286 microprocessors.

   (c) What do you mean by assembler directives? Explain the following directives.

      i. Byte PTR

      ii. Length

      iii. Assume

   (d) Differentiate between minimum mode & maximum mode of 8086.

   (e) Explain the need of program counter (PC) & stack pointer (SP) in a 8085 microprocessor.

3. Attempt **any two** of the following: [10x2]

   (a) Write a program for addition of two 8 bit numbers.

   (b) What is the advantage of DMA controlled data transfer over interrupt driven or program controlled data transfer? Why are DMA controlled data transfer faster?

   (c) Write short notes on:

      i. Pentium processor

      ii. Addressing modes of 8051

4. Attempt **any two** of the following: [10x2]

   (a) Explain the architecture of 8051 microcontroller.

   (b) Explain the block diagram of 8255.

   (c) Give the format of flag register of 8086 & explain each flag

5. Attempt **any two** of the following: [10x2]

   (a) Explain the interrupt structure of 8085.

   (b) Describe the interfacing of an 8259 PIC to 8086 microprocessor.

   (c) Draw the pin configuration of 8051. Explain the function of each pin.

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